

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) A method Method of cleaning a filter during operation of a vehicle comprising an internal combustion engine (10) which and a transmission (10) drivable by said engine, during operation, sends the internal combustion engine configured to send, in operation, exhaust to an exhaust system (140) comprising said filter, and a transmission (10) drivable by said engine, characterized by the steps the method comprising the consecutive steps of:

[[-]] selecting a first gear ratio in the ~~vehicle~~ transmission so that a first temperature within a first temperature interval is obtained, the first interval being dependent on a first degree of plugging of the filter with regard to a first particle type[[],]; and

[[-]] then selecting a second gear ratio so that a second temperature within a second temperature interval is obtained, said second temperature interval being dependent on ~~another~~ a second degree of plugging of the filter with regard to a second particle type, the first particle type and the second particle type being different from each other,

wherein and said selection of said first and second gear ratios achieving a cleaning of the filter.

2. (currently amended) The method Method according to claim 1, ~~characterized in that~~

[[-]] wherein a catalytic converter in the exhaust system (140) is utilized to achieve an increased degree of conversion of ~~possible~~ any NO_x[[,]] compounds in the exhaust to nitrogen dioxide and oxygen depending on ~~the~~ a temperature change between the first and second temperatures,[[;]] and

[[-]] wherein ~~that~~ oxygen in the filter, placed downstream of the catalytic converter in the exhaust system, is used to combust captured particles which have been caught in the filter so that they are removed from the filter, thereby reducing said first degree of plugging.

3. (currently amended) The method Method according to claim 1, ~~characterized in that~~

[[-]] wherein ~~the~~ an amount of particles generated by the internal combustion engine ~~during its operation~~ is computed depending ~~of~~ upon parameters ~~which affect~~ affecting ~~the~~ operating conditions of the internal combustion engine[[;]], and ~~that~~

[[-]] wherein the first degree of plugging ~~of~~ the filter is estimated ~~depending~~ based on the ~~calculated~~ computed

amount of particles and ~~the~~ based on filtering characteristic characteristics of the filter.

4. (currently amended) ~~The method Method~~ according to claim 1, ~~characterized in that wherein~~ the first degree of plugging ~~in the filter depending on the flow resistance in the filter~~ is estimated based on a flow resistance in the filter.

5. (currently amended) ~~The method Method~~ according to claim 1, ~~characterized in that wherein~~ the selection (+s435) of the second gear ratio in the vehicle transmission is ~~effective~~ depending on conditioned upon a comparison of ~~said~~ information indicating the first degree of plugging of the filter (320) and a predetermined boundary value ~~information~~.

6. (currently amended) ~~The method Method~~ according to claim 1, ~~characterized in that wherein~~ said second selected gear ratio is maintained during a time interval depending on the first degree of plugging of the vehicle at ~~the~~ a beginning of the cleaning ~~process~~ and ~~the~~ a desired degree of the plugging at ~~the~~ an end of the cleaning ~~process~~.

7. (currently amended) A motor Motor vehicle comprising:

~~an internal combustion engine (10); which, during operation, sends exhaust to~~

a transmission (90) drivable by the engine;

an exhaust system (140) comprising a filter (320), the internal combustion engine configured to, in operation, send exhaust to the exhaust system; and

~~control means (45; 48) and a transmission (90) drivable by the engine, characterized in that~~

wherein the control means (45; 48) are arranged configured to select a first gear ratio in the transmission so that a first temperature within a first temperature interval is obtained, said first interval being dependent on a first degree of plugging of the filter with regard to a first particle type[[]], and

wherein that the control means (45; 48) are further arranged configured to then select a second gear ratio in the transmission so that a second temperature within a second temperature interval is obtained, said second temperature being dependent on another a second degree of plugging of the filter with regard to a second particle type, the first particle type and the second particle type being different from each other, and that the selection of said first and second gear ratios achieving a cleaning of the filter.

8. (currently amended) The motor Motor vehicle according to claim 7, ~~characterized in that wherein~~ the control means (45, 48) comprise a control unit (48) for controlling the engine (10) and a control unit (45) for controlling the transmission (90).

9. (currently amended) The motor Motor vehicle according to claim 7, ~~characterized in that wherein~~ a catalytic converter (310) in the exhaust system (140) is arranged configured to achieve an increased degree of conversion of any NO_x compounds in the exhaust to nitrogen dioxide and oxygen, depending on the a temperature change between the first and second temperatures, and further configured to utilize oxygen in the filter (320) placed downstream of the catalytic converter (310) in the exhaust system to combust particles caught in the filter so that these the particles are removed from the filter, thereby reducing said first degree of plugging.

10. (currently amended) The motor Motor vehicle according to claim 7, ~~characterized in that wherein~~ an estimator (190) is arranged configured to calculate the an amount of particles generated by the internal combustion engine during its operation, depending on based upon parameters affecting on engine operating conditions, and further configured to estimate the

first degree of plugging of the filter depending on the calculated amount of particles and ~~the~~ based on filtering ~~characteristic~~ characteristics of the filter.

11. (currently amended) The motor Motor vehicle according to claim 7, ~~characterized in that~~ wherein the sensors are arranged to estimate the first degree of plugging of the filter ~~depending on~~ based upon a flow resistance in the filter.

12. (currently amended) The motor Motor vehicle according to claim 7, ~~characterized in that~~ wherein the control means (45; 48) are ~~arranged~~ configured to select [[a]] the second gear ratio in the vehicle transmission depending on a comparison of ~~said~~ information indicating the first degree of plugging of the filter (320) and ~~the~~ a predetermined boundary value ~~information~~.

13. (currently amended) The motor Motor vehicle according to claim 7, ~~characterized in that~~ wherein the control means (45; 48) are ~~arranged~~ configured to ~~select a~~ Maintain the second gear ratio ~~which is maintained~~ during a time interval depending on the first degree of plugging of the filter at ~~the~~ a beginning of the cleaning process and ~~the~~ a desired degree of plugging at ~~the~~ an end of the cleaning process.

14. (currently amended) A physical computer readable recording medium that tangibly records a computer program comprising program code for carrying out configured to execute on a computer comprising a processor, a memory, and a means for reading from said computer readable recording medium, said program code causing the computer to perform the method steps of claim 1, when said computer program is executed in a computer.

15. (currently amended) A computer computer program product comprising program code stored on a medium readable by a computer for carrying out the method steps in claim 1, when wherein said computer program is executed in the computer.

16. (canceled)